DRAFT Fisheries Management Plan

Public Comment and Review Document, June 2009

Saskatchewan
Ministry of
Environment

Vision

Healthy, sustainable fish populations and habitat providing diverse benefits for Saskatchewan.

Draft Fisheries Management Plan

Overview

Saskatchewan enjoys an abundance of lakes and streams, with an estimated 50,000 waters that contain fish. The majority of fish bearing waters are located in the northern half of the province, while the most productive waters are contained within the south. Saskatchewan presently has 69 species of fish, 58 of which are native to the province and an additional 11 species that have been introduced or have invaded. Saskatchewan's fishery provides diverse opportunities for the province's residents and visitors. Most of the fishing effort and harvest is focused on five species: pike, walleye, perch, lake trout and whitefish.

Saskatchewan's fishery resource is an important contributor to the well-being of the province's residents. The Ministry of Environment recognizes this importance and initiated a review of the fishery to examine the many factors that have influenced, and continue to shape the fishery, as we know it today. Over the past three years, the ministry has sought the input of the public, First Nations and Métis, stakeholders, businesses and organizations across the province on fisheries management. Discussions will continue through plan finalization and plan implementation.

This document provides a framework for maintaining and building upon the significant values and benefits of Saskatchewan's fishery, and forms the basis for ensuring the fishery continues to be enjoyed by current and future generations. The plan covers all areas of responsibility for which the Ministry of Environment has statutory control: sustenance fishery, recreational fishery, commercial net fishery and the outfitting industry.

Outcomes	Objectives	Key Challenges
1. Sustainable Management	Maintain Productive Capacity	Appropriate planning and actions are required to lessen the future potential effects of environmental threats.
		Incorporating fishery productivity and habitat considerations into water management planning and operations.
		Minimizing the effects of human activities and developments on aquatic habitats while promoting economic development and growth.
		Lack of clear direction and guidelines for fisheries enhancement programs and activities.
	Manage Harvest to Match Sustainable Supply	Managing fisheries in a sustainable manner with limited information on the productive capacity and state of fish stocks for many Saskatchewan waterbodies.
		Species-selective harvest may cause a shift in the species composition over time.
		Defining a level of sustainable harvest that meets multiple interests and changing environmental conditions.
		Collecting accurate, up-to-date harvest information from users to monitor the fishery.
		Regulating the harvest to ensure sustainability on both a broad scale and for individual lakes.
		Utilizing fish stocking in a cost-effective manner that complements fisheries conservation and management objectives.
		Providing appropriate enforcement to achieve user compliance with legislation.
		Balancing demand for road and recreational development with the desire to maintain quality fishing and fish populations.
2. Protect and Accommodate the Treaty and Aboriginal Right to Fish	Acknowledge and recognize the importance of Treaty and Aboriginal rights in fisheries policy and practices	Key Challenges will be discussed and developed in partnership with First Nations and Métis fisheries advisory committees.
	Encourage and support the involvement of First Nations and Métis communities in fisheries management	
3. Allocation to Optimize Social and Economic Benefits	Maintain Public Access	A licensing system that provides equitable opportunity and fair return to the province.
	Recognize Multiple Uses	Allocation of the fishery that meets the Treaty and Aboriginal obligations to First Nations and Métis people and provides optimal social and economic benefits to the province.
		Balancing the harvest to meet competing interests.
	Promote and Develop Opportunities	Current methods of allocating to commercial users limits opportunity to others who wish to utilize the fishery.
		Opportunities to increase the social and economic benefits from the fishery may exist, but have not been fully investigated or utilized.
		Providing a diversity of fishing opportunities to meet the interests of distinct users where biologically and ecologically feasible.
4. Shared Responsibility and Public Engagement	Informed Users	Enhancing public knowledge about fisheries management.
		Promoting personal stewardship of the provincial fishery.
	Public Participation and Community Involvement	The need for communication processes that are effective and efficient.
		A need to determine the best methods of effectively resolving conflicts that arise among the multiple users.

Plan Development

The last provincial fisheries plan was implemented in the early 1990s, and does not provide the necessary means to address emerging pressures on the fishery resource. Emerging pressures include: climate change; increasing access to the resource; evolving understanding of Treaty and Aboriginal rights to fish; the development of new technologies to harvest fish; and increased competition among users. The ministry wanted to engage all user groups to determine how to best manage the provincial fishery over the next decade.

The duty to consult with First Nations and Métis on the proposed provincial fisheries management plan has been recognized and incorporated into planning activities since the earliest stages of the planning process. Information and invitations to participate in plan development were sent to all Saskatchewan First Nations and Métis Locals in July 2006 and November 2007. In January 2008, a pre-consultation committee was established with representatives from each of the Tribal Councils, the FSIN, and the ministries of Environment and First Nations and Métis Relations (FNMR). The pre-consultation steering committee met seven times and recommended that a two-day conference with First Nations resource users, elders and youth was a necessary first step towards an effective and respectful consultation process. The conference, held on January 7 and 8, 2009, was well attended, with more than 200 First Nations participants. In February 2009 the ministry engaged the Métis Nation of Saskatchewan to develop a consultation process that is respectful to both parties. An interim fisheries advisory committee has been created and has met on two occasions to further define the consultation process.

From October 2006 to February 2007, the Ministry of Environment conducted 25 public open houses across the province to collect input on fisheries management in Saskatchewan. More than 400 people attended the open houses and provided over 1,600 comments about the provincial fishery. The document, *Public Suggestions for Fisheries Management in Saskatchewan,* was released in July 2007 and summarized the comments and suggestions put forward by the public. Ministry staff utilized these comments and suggestions to prepare discussion documents on the key challenges to be addressed during a roundtable discussion process.

The Ministry of Environment established the Fisheries Advisory Committee in 1980 to provide advice and input from a broad spectrum of fishery resource users, including First Nations and Métis. The committee was tasked with developing the vision and principles of the plan, reviewing discussion documents and providing recommendations for ministry consideration in the fisheries management plan. The fisheries advisory committee met seven times during 2007/08 to consider the issues related to fisheries management in Saskatchewan. These discussions delivered a clear message; the plan must be well co-ordinated to ensure decisions are consistent, fair to all interests and reflect the necessary balance between conserving our natural resources and the demand for social and economic opportunities.

Framework Principles

Make decisions based on best available scientific knowledge, ecological principles and traditional ecological knowledge (TEK).

What does this mean?
The ministry is committed to using the best available scientific evidence and traditional ecological knowledge to inform its decisions. Ecology is the study of the distribution and abundance of organisms, and their interactions with other organisms and their environment. The principles of ecology, such as adaptation and predator/prey relationships (among others), underpin fisheries science utilized when making management decisions.

TEK refers to an evolving knowledge about interactions and relationships between living beings and the natural world that has been developed over generations of observations. This knowledge base can parallel and complement the discipline of ecology and add to the understanding of plants, animals, natural phenomena, and can enhance the development and management of natural resources such as hunting, fishing, trapping, agriculture, mining and forestry. The identification and application of TEK requires the participation and approval of First Nations and Métis communities.

Ensure Treaty and Aboriginal rights are recognized and respected.

What does this mean?
First Nations' Treaty rights and Métis Aboriginal rights to fish, trap and hunt are recognized and protected by Section 35 of *The Constitution Act, 1982*. These rights are given priority over all other uses. Only valid conservation concerns or other justifiable concerns can supercede these rights. Governments have a legal duty to consult with First Nations and Métis communities on matters that may impact the ability to exercise those rights.

Maintain ecosystem health.

What does this mean?
For Saskatchewan to continue to benefit from its fishery resources, the environment must be fit and healthy for fish and the organisms upon which they depend. Every species of fish in an aquatic community plays an important and integral role in the overall healthy function of the ecosystem. The diversity of a fish community is closely related to the variety and health of habitat. The entire community of organisms in the aquatic ecosystem is important to ensure that fish populations continue to thrive for future generations. Fisheries management strategies will consider the fish community and aquatic ecosystem in its entirety.

Focus on the long term and consider broader implications.

What does this mean?
Policies, legislation and management actions should focus on the long term conservation and sustainable use of fishery resources. Conservation and management measures, whether at the local, watershed, management zone, or provincial levels, will be designed to ensure the long-term sustainability of fishery resources and to maintain the quality, diversity and availability of fishery resources in sufficient quantities for present and future generations. Short-term considerations should not compromise these objectives.

Utilize precautionary, adaptive management approaches to fisheries management.

What does this mean?
Adaptive management responds to scientific and TEK uncertainty by implementing decisions based on best available information, monitoring outcomes effectively and adjusting our thinking and actions based on a thoughtful analysis of our experience. This approach provides a formal and consistent means of evaluating management alternatives with respect to outcomes and ensures uncertainties are explicitly described and evaluated during the decision-making process.

Provide opportunity for open and meaningful involvement of stakeholders to promote shared stewardship.

What does this mean?
Effective fisheries management needs to consider and understand the impact of decisions on the people involved. Opportunity exists to provide factual information about fisheries management principles and science and how each of us as individuals can do our part to utilize the resource wisely and in a sustainable manner. Public awareness and engagement in fisheries management are essential to sustaining aquatic habitats and fish populations. The privilege or right to fish carries with it the obligation to do so in a responsible manner to ensure effective conservation and management of fishery resources.

Provide optimal, sustainable benefits for all Saskatchewan.

What does this mean?
Saskatchewan residents all have a stake and share in the use of the province's fishery resource. A variety of experiences need to be offered that meet the demands of Saskatchewan residents' preferences including consumptive and non-consumptive uses. Ideally, the preferred combination of the various uses will maintain ecosystem health and long-term economic benefits to Saskatchewan. Understanding and respect for differing economic, cultural, heritage and social views, values, traditions and aspirations concerning the fishery resource will be promoted.

Maintain public access to the fishery.

What does this mean?
Saskatchewan, and other North American jurisdictions, have a history of providing reasonable opportunity to fish to the public. This tradition of public ownership and access will be maintained.

Provide clear, understandable and effective fisheries management.

What does this mean?
Effective fisheries management includes clear objectives, strategies to achieve these objectives and monitoring programs that assess if objectives are being met. The information relevant to these three processes must be widely available to the public to establish confidence in strategies and ensure transparency in decision-making. A transparent process ensures that management objectives are evaluated from biological, ecological, economic, social and political perspectives.

Promote regulatory compliance through education, verification and enforcement.

What does this mean?
The ministry strives to achieve high levels of voluntary compliance by setting clear requirements, educating client groups on those requirements and their rationale and monitoring whether or not they are being followed. An important element of harvest monitoring is to check for user compliance with legislation and to enforce the legislation in non-compliance situations.

Outcomes

To achieve the Vision, four Outcomes have been identified that encompass the key elements of the Management Plan and help align our policies and delivery efforts.

1. **Sustainable Management**
2. **Protect and Accommodate the Treaty and Aboriginal Right to Fish**
3. **Allocation to Optimize Social and Economic Benefits**
4. **Shared Responsibility and Public Engagement**

Outcome 1

Sustainable Management

Introduction

Fish, although renewable, are not infinite and fisheries need to be properly managed if their contribution to the economic and social well-being of Saskatchewan residents is to be sustained. Sustainable management is a resource managed such that it meets the needs of the present without compromising the ability of future generations to meet their own needs. In other words, each fish harvested maximizes benefits while minimizing harm to the environment and to the ability of the population to replenish itself. Saskatchewan must demonstrate that ongoing and proposed use of the provincial fishery will not impair management options in the next 15 to 20 years.

Sustainability requires balancing the three "legs" of ecological, social and economic interests in decision-making.

- Ecological considerations: strive to maintain individual stocks and species at levels that maintain or enhance the capacity and quality of the ecosystem.
- Social considerations: strive to maintain or enhance the welfare of participating and affected communities and individuals.
- Economic considerations: strive to maintain overall viability within local and provincial economies by generating sustainable economic benefits.

Fisheries are sustainable if the aquatic ecosystems (including their structure, functions and services such as recreational or commercial fishery) persist in the long term. Sustainable management of inland fisheries conserves fish populations and diversity, maintains water quality and ecosystem health, utilizes sound management, is economically viable and is socially acceptable.

Objective 1: Maintain Productive Capacity

Ecosystems vary in complexity and each layer of complexity inherently reduces the predictability of the interactions. Aquatic habitats and their sustainability for fish are shaped by many factors including: the physical structure of the environment, its chemical and hydrological properties and the biological organisms that reside there. Both watershed level and site-specific characteristics interact to influence the structure, composition and function of aquatic ecosystems. Understanding these characteristics and having the ability to measure the productivity and health of an ecosystem is fundamental to the management of biological resources.

Key Challenge: *Appropriate planning and actions are required to lessen the future potential effects of environmental threats.*

Environmental threats, such as climate change, may result in both dramatic and subtle changes to aquatic ecosystems. These disturbances and their initial effects may be subtle, local and difficult to detect, yet their long-term influence may be profound and extensive. Change in physical and chemical features of the environment (e.g. temperature, wind, pH levels) may cause change to the composition of species assemblages and to ecosystem function. In addition to their individual effects, such environmental changes may have cumulative effects on aquatic ecosystems because they interact in complex ways.

Environmental threats of particular relevance to Saskatchewan's fishery include climate change, acid rain, invasive species and disease. Each of these threats has the potential to impact Saskatchewan's fishery; however, their combined effects could be considerable if no action is taken.

Management Approach:

- Develop appropriate fisheries management strategies to adapt to climate change.

Action: Expand the collection of baseline data to monitor and assess change to aquatic ecosystems.

Action: Assess the vulnerability of aquatic species to and impact of climate change to Saskatchewan's fishery.

Action: Monitor the acidity of precipitation and receiving waters, and work with Alberta to develop means to lessen the risks of lake acidification.

Action: Strengthen provincial legislation to prevent the occurrence and control the spread of harmful diseases and invasive species.

Action: Partner with the Canadian Food Inspection Agency and Fisheries and Oceans Canada to develop and implement the National Aquatic Animal Health Program.

Key Challenge: *Incorporating fishery productivity and habitat considerations into water management planning and operations.*

Land drainage, irrigation and production of hydroelectricity can impact aquatic ecosystems through habitat modifications, impede fish migration to spawning grounds and alteration of freshwater flows. These impacts can reduce the fishery resource abundance on rivers and lakes downstream of the activity.

Action: Continue ministry participation in watershed planning and other water management planning and policy development led by the Saskatchewan Watershed Authority.

Action: Continue ministry participation on working committees intended to address fisheries issues related to hydro-development operations.

Key Challenge: *Minimizing the effects of human activities and developments on aquatic habitats while promoting economic development and growth.*

Human activities can reduce the ability of lakes to support productive fish populations through their cumulative effects on water quality and aquatic habitats.

Many of the drivers of the provincial economy and activities that maintain our living standard and quality of life may affect aquatic habitats. Industrial activities, urban and recreational developments, roads, dams, and agricultural land uses and developments, have the potential to affect Saskatchewan's aquatic habitats and fisheries.

Due to increasing industrial activity in northern Saskatchewan, the number of roads and trails providing access to remote lakes is increasing. These roads and trails, if not constructed properly, can have detrimental impacts on fish habitat by creating erosion and other habitat degradation. Siltation of critical habitat can ruin spawning areas.

Commercial and residential development of lakeshores may change a number of key lake features that include increased nutrient loading, increased invasion rate of non-native species and alteration of shoreline habitats.

Management Approach:

- A balanced approach to economic development and environmental protection will be taken. Appropriate environmental considerations and safeguards will be a part of all development proposals and plans. Particular attention will be applied to the sensitive ecosystems of northern Saskatchewan.
- After approval of any development, the necessary compliance activity will be undertaken to ensure appropriate environmental regulations, standards and guidelines are followed.
- The ministry will provide staff capacity and competencies required to ensure appropriate environmental protection oversight for activities and developments.

Action: Complete results-based regulation reform and develop standards that guide development affecting aquatic habitats for incorporation into the Environmental Code of Practice.

Key Challenge: *Lack of clear direction and guidelines for fisheries enhancement programs and activities.*

With the establishment of the Fish Enhancement Fund in 1984 (now the fisheries component of the Fish and Wildlife Development Fund), opportunities to enhance aquatic habitat became available through increased monies and designated staff. Thirty per cent of the price of each angler's licence is deposited into the Fish and Wildlife Development Fund to be used to improve fish habitat and carry out other fisheries management activities. Habitat enhancement activities have included: installation of aeration systems; construction of spawning reefs for walleye and trout; stream enhancement; and the creation of trout ponds, fish rearing ponds and spawning marshes.

Projects to enhance and diversify fishing opportunities in Saskatchewan have been done on an ad hoc basis, as ideas and interests were generated from resource users and within government.

Management Approach:

- The Fish and Wildlife Development Fund (FWDF) will focus on the following list of fisheries activities:
  - habitat enhancement projects;
  - species at risk projects;
  - research, data collection and inventory;
  - education;
  - student bursaries for fisheries research;
  - support for First Nations and Métis projects/programs;
  - stocking and fish population enhancement; and
  - waterbody accessibility and user facilities.
- Projects and activities should be considered and completed on a cost-effective basis.

Action: Develop and implement a fisheries enhancement plan, in partnership with resource users, which provides direction for the future, identifies priorities, explores options to increase revenues and contains a process for monitoring and evaluating program effectiveness.

Action: Implement regular and ongoing program evaluation of the FWDF. Criteria to be considered in the evaluation will include: benefit to the resource, benefit to the users, cost effectiveness and safety considerations.

Objective 2: Manage Harvest to Match Sustainable Supply

Fisheries management strives to maximize the value of fish harvested within sustainable limits. Sustainable use of fishery resources is achievable when humans use fish populations in ways that allow natural processes to replace what is used.

Key Challenge: *Managing fisheries in a sustainable manner with limited information on the productive capacity and state of fish stocks for many Saskatchewan waterbodies.*

Knowledge of the productive potential of the lake, suitability of its habitats, the status of its fish populations and factors affecting reproduction and mortality is important to fisheries management. Fisheries biologists endeavour to link data gathered from limnological studies, fish stock (population) data and harvest data to provide information for fisheries management. Fishery productivity is defined as the capacity of a waterbody to support a fish biomass (carrying capacity) and to provide a sustainable fish harvest. Given the complexity and unpredictable nature of ecosystems, it is necessary to concentrate on measuring a few fundamental components. These indicators must be measurable with the technology that is available at the time.

Natural recruitment to fish populations may vary considerably from year to year, resulting in an uneven distribution in the structure of age classes. The factors influencing recruitment success include seasonal effects of water temperature, water levels during critical life stages and the availability of the substrate required for spawning. For example, high, stable water levels in spring that flood vegetation may result in improved pike recruitment in that year.

With tens of thousands of lakes and many lakes in remote areas, there is a high cost to collecting productivity information for all fish-bearing waters in Saskatchewan. Specific issues related to the fishery resource largely drive fisheries assessment priorities.

Management Approach:

- The ministry will use the following elements when conducting assessments of lake productivity and fisheries:
  - Best Practices, good science and TEK
  - adequate resources for field study and subsequent analysis and reporting
  - partnerships with, and seek funding and assistance from, other groups, agencies and volunteers wherever possible (e.g. universities, SIAST, conservation organizations, First Nations, Métis, industry, anglers, etc.)
  - efficient and understandable processes and procedures for involving the public in monitoring and assessment programs.
- Policies and legislation will reflect the results of monitoring and assessments.

Action: Review and evaluate fishery productivity models used in other jurisdictions and refine them, as required, for use in Saskatchewan.

Action: Develop standard procedures for prioritizing fisheries field assessments based upon the importance of the fishery and sustainability issues.

Action: Review and refine standardized, science-based protocols for field data collection and reporting.

Key Challenge: *Species-selective harvest may cause a shift in the species composition over time.*

Changes in the abundance of top predators can change the entire aquatic community structure. When the abundance of adults of top predator species is reduced, there is a greater chance that forage species may increase in number and limit the abundance of the predator through competition with, or predation of their young.

Fishing mortality can be excessive for highly valued fish species especially for the larger size classes. Such size selectivity can cause a higher percentage of younger and smaller fish in the population and may affect reproduction.

Management Approach:

- Encourage the harvest of smaller fish and underutilized species through education, regulation and other incentives when necessary.

Key Challenge: *Defining level of sustainable harvest that meets multiple interests and changing environmental conditions.*

In a healthy fishery, there is an amount of fish that can be safely harvested each year while ensuring the fish population is able to sustain itself, which is referred to as the harvestable surplus. This harvestable surplus is often expressed as the weight of fish harvested per unit area of lake per year (kg/ha/yr). Because fish reproductive success in a given year is variable, the harvestable surplus varies in response to changes in fish population abundance.

In order to manage a sustainable fishery, biologists strive to understand the current status of the fishery, and then forecast this status into the future. Recent management theory has recognized that considerable statistical uncertainty and risk exist in setting sustainable harvest targets. In determining a fish stock's harvestable surplus, a fisheries biologist may have to choose between different harvest models that have different assumptions between types of data. One choice would lead to high estimates of sustainable harvest; in contrast, another choice would lead to lower estimates.

Harvest rates sustainable under one set of environmental conditions may not be sustainable, however, if conditions change. Development of a sustainable harvest policy, must account for environmental conditions, exploitation rates and the desired end products.

Management Approach:

- Sustainable harvest will allow opportunity for differing fisheries management objectives based upon rights, interests and demands on the fishery resource by users.

Action: Define management objectives and develop specific targets and actions for provincial waters, in consultation with users.

Key Challenge: *Collecting accurate, up-to-date harvest information from users to monitor the fishery.*

Accurate harvest information is important to manage a sustainable fishery. Without this information it is easy to exceed sustainable harvest levels, which can result in population collapse. Recovery of these populations may be slow to nonexistent without significant and costly intervention.

Action: Conduct a provincial angler survey every five years as part of the cross-Canada angler survey.

Action: Develop a web-based angler diary with incentives to promote angler participation.

Action: Develop a web-based system to collect outfitter harvest information.

Action: Improve the commercial fishing database system.

Action: Work with all Competitive Fishing Events (CFE) organizers to emphasize the importance of licensing and reporting.

Action: Improve data collection and tracking of the bait fishery and the commercial harvest of aquatic invertebrates.

Action: Partner with First Nations and Métis to obtain up-to-date information on the Aboriginal sustenance harvest.

Key Challenge: *Regulating the harvest to ensure sustainability on both a broad scale and for individual lakes.*

The ministry strives to have straight forward, easy to understand legislation that matches harvests to resource availability on a broad scale and for individual lakes. Complex regulations detract from the fishing experience, are difficult to understand and comply with, and do not necessarily improve fishing success. However, it is difficult to manage the province's several thousand fish bearing lakes and streams of all sizes, with vastly different productivity, species mix, ease of access, proximity to population centres, quality of fishing, accommodation or levels of fishing, with one simple set of regulations. The number of waterbodies with special regulations increases each year, despite efforts to keep regulations simple and straightforward.

Regulations serve a variety of purposes; however, the general objective is to limit the catch to biologically safe levels. The overall fish harvest can be regulated by: limits to the numbers and size of fish that can be taken; limits to the times and places that can be fished; limits to the gear that can be used or by limiting the number of participants.

Angling demand on a particular waterbody is dependent on the quality of fishing, ease of access, harvest limitations and the availability of alternative fishing opportu[illegible]. Conservation measures applied to one water may cause anglers to shift to other waters with more liberal regulations.

Management Approach:

- Broad-based provincial harvest regulations will be based upon the current three fisheries management zones and consider their differing ecological, social and economic characteristics.
- Special fisheries management zones or areas will be considered and implemented when warranted.
- In order to maximize opportunity, the ministry will consider the following order of priority when determining suitable harvest controls to manage the fishery:

    1. limits and specific area closures
    2. seasons; and
    3. gear restrictions.

Action: Use seasons and harvest limits to manage use on a provincial, regional and local basis.

Action: To alleviate harvest pressures, additional conservation measures (harvest controls) will be implemented for walleye and lake trout in the central and northern angling zones.

Action: Similar to regulations found in Manitoba and Alberta, implement mandatory use of barbless hooks province wide to minimize post-release mortality due to catch and release.

Key Challenge: *Utilizing fish stocking in a cost-effective manner that complements fisheries conservation and management objectives.*

Fish stocking is a management tool available to fisheries managers to create new fisheries, supplement or enhance existing fisheries, or help recover degraded fisheries. It is a common misconception that stocking is the solution to depleted or collapsed fisheries, when in reality the effectiveness of a stocking program to rehabilitate these fisheries varies greatly. The success of fish

stocking efforts is affected by many factors including: habitat suitability; productive capacity of the waterbody; the size and quantity of fish stocked; the presence of fish species that compete for food or prey on the stocked fish; and environmental factors that affect survival.

The supply of fish for stocking is limited by hatchery production, suitable spawning sources and overall costs. Stocking activities tend to be most successful in smaller southern waters with suitable habitat, but where fish are incapable of sustaining themselves due to limited natural reproduction. Studies have shown that most self-sustaining populations do not benefit from supplemental stocking and that stocking cannot be used to sustain a fishery above the productive capacity of its environment.

Management Approach:

- The ministry will focus stocking efforts on lakes where benefits are significant and exceed costs. Stocking should be avoided for waters that are likely to have poor success due to frequent winterkill or other environmental and biological factors.
- The ministry will continue to manage fish stocking in Saskatchewan in accordance with the National Code on Introductions and Transfers of Aquatic Organisms.
- The ministry will use the following order of priority to guide fish stocking in the province:

  1. enhance existing fisheries (including recovery of populations and species at risk);
  2. establish new fisheries;
  3. provide urban angling opportunities; and
  4. provide put and take fisheries.

Action: Provide informational materials to the public on the role, use and limitations of fish stocking for fisheries management.

Action: Review and revise the provincial stocking policy as required to ensure the stocking program continues to meet current and future fisheries management objectives in a cost-effective manner.

Key Challenge: *Providing appropriate enforcement to achieve user compliance with legislation.*

Enforcement strategies must be firm, fair, consistent and timely to be effective, and are necessary to retain public confidence and support for fair, ethical and sustainable use of our natural resources and the environment.

Most individuals are willing to accept a limit on the number of fish they can harvest, in return for an assurance this will protect the resource for future use. However, some may opportunistically engage in noncompliance if the potential for personal reward is high and the perceived risk of detection is low.

Action: Amend fisheries regulations to include mandatory licence suspensions similar to those found in wildlife legislation.

Action: Continue risk-based compliance planning to focus compliance and enforcement efforts on the greatest threats to the fishery.

Key Challenge: *Balancing demand for road and recreational development with the desire to maintain quality fishing and fish populations.*

Expansion of roads and trails for social and economic development purposes, combined with increasing demand for lakeside recreational developments may result in increasing harvest pressure on some lakes. Lakes that were previously accessible only in the winter or by floatplane may now have year-round access, providing anglers and other resource users with opportunities to harvest fish from lakes that had little previous use, or sustained a remote outfitting operation.

Management Approach:

- The Ministry of Environment will take appropriate proactive fisheries management conservation measures when new road access or cabin development is planned.
- Land use plans will continue to consider existing fisheries, wilderness and traditional values.
- Some areas will remain unavailable to recreational developments to preserve and accommodate other values and interests.

Action: The province will collect up-to-date information on the effects of cottage development on the fishery harvest. This information will be used to help guide future recreational development on lakes.

Outcome 2

Protect and Accommodate the Treaty and Aboriginal Right to Fish

Introduction

The intent of the new fisheries management plan will be to ensure the long-term sustainability of the fishery, which reflects, and respects the rights of First Nations and Métis and re-affirms the paramountcy of those rights in fisheries allocations. This outcome will ensure the importance of Treaty and Aboriginal rights are acknowledged and recognized in fisheries policy and practices and during discussion on fishery resource management issues.

The Ministry of Environment is committed to working with First Nations and Métis to develop mutually respectful working relationships that will encourage and support the involvement of First Nations and Métis communities in the management of the province's fishery resource.

First Nations

Fishing rights remain a significant aspect of the Treaty relationship between the Crown and First Nations and the use of fish remains an important component in cultural and social events as well as for economic reasons. First Nations participation in the planning process is critical to the successful development of a fisheries management plan.

Representatives of First Nations from across the province attended a First Nations Fisheries Conference in Saskatoon during January 2009.

The two-day conference served to disseminate information on fisheries management, identify priority issues for First Nations and facilitate discussions specifically on the development of the new provincial fisheries management plan.

Since the conference, First Nations have been working to establish a Saskatchewan First Nations Fisheries Advisory Council. The council will be comprised of one representative from the Lands and Resources Commission and one representative from each Tribal/Agency/Grand Council in the province.

Initially the goal of the fisheries council will be to work in conjunction with the Ministry of Environment on developing the new provincial fisheries management plan. The council's long-term goal will be to develop a First Nations Fisheries Management System.

Métis

Métis use of the fishery resource for sustenance, cultural and economic activities occurs across the province. Métis fishing rights have been recognized by the courts pursuant to Section 35 of the Constitution Act, 1982. Awareness of the government's responsibility to respect Métis rights to the fishery and their participation in the planning process is integral to the successful development of a fisheries management plan.

Métis Nation Saskatchewan (MNS) is establishing a standing fisheries advisory committee with a mandate to advise MNS leadership and assist with development of policy, legislation and strategies on Métis use of the fishery. The committee will be comprised of the MNS minister responsible for fisheries and representatives of the 12 Métis regions in the province. This committee will advise the minstry on a respectful process for engaging Métis in the development of a long-term sustainable fisheries management plan.

The MNS is facilitating the consultation processes with Métis people, which started with two rounds of regional meetings to inform Métis and collect their concerns and comments on the fishery. These regional meetings will be followed by a fall conference to provide the opportunity for a two-way exchange of ideas on fisheries management with the ministry that will be used in developing thenew provincial fisheries management plan.

Action: Work with First Nations and Métis in support of their initiatives to preserve and protect the fishery resource.

Outcome 3

Allocation to Optimize Social and Economic Benefits

Introduction

A fundamental component of fisheries management is allocation, or "who gets what".

To ensure sustainability, only a portion of a fish population can be harvested. On some waters this potential harvest must be shared between different groups of resource users. Sharing the fish between users is complicated by two factors:

1. Although all users want to catch fish, the type of fish, the experience they desire, or the values they gain from doing so are often very different.
2. Fish are subject to the "rule of capture" whereby a resource user does not have ownership to individual fish until the fish are caught.

As the overall demand and the harvest increases, careful regulation of the harvest and explicit allocation of the available harvest becomes more important.

Objective 1: Maintain Public Access

The fishery resource is considered held in public trust for the benefit of all. Saskatchewan has a history of providing public access to the resource.

Key Challenge: *A licensing system that provides equitable opportunity and fair return to the province.*

To ensure reasonable access to the fishery, Saskatchewan residents are provided the opportunity to purchase an angling licence at a modest price, which provides fishing opportunities on provincial Crown waters.

Management Approach:

- Reduced fee licence options will be based upon the opportunity to fish that is provided by the duration of a licence, rather than the number of fish allowed to be harvested.
- Provide policy development and a regulatory environment that supports public access and education.

Action: Develop a licence structure with options based upon the opportunity to fish.

Action: Develop an automated licensing system to provide greater convenience to the angling public.

Objective 2: Recognize Multiple Uses

Multiple use of the fishery is a long-standing Saskatchewan tradition, and more than one user group harvests fish in many Saskatchewan lakes. The goal has been to achieve a balanced harvest in all lakes and utilize all species to the greatest extent possible within sustainable limits.

Many larger lakes in central and northern Saskatchewan are road accessible and experience multiple uses by sustenance users, recreational fishing, commercial fishing and outfitting.

Management Approach:

- Multiple use will be applied as an overall goal for managing the provincial fishery resource. Allowed uses on any individual waterbody will depend, however, on the following considerations:
  - geographic location;
  - historic uses;
  - social and economic considerations;
  - sustainable limits; and
  - species of fish targeted.

Key Challenge: *Allocation of the fishery that meets the obligations to Treaty and Aboriginal rights and provides optimal social and economic benefits to the province.*

In Saskatchewan, as in most jurisdictions, the primary goal of fisheries management is to provide for optimal human use of the fishery resource while protecting and conserving the fish and their habitats for future generations. This goal of optimal use, combined with the province's Treaty and Aboriginal rights to First Nations and Métis people, is reflected in the priority for allocating the fishery resource.

Management Approach:

- Allocation of fishery resource uses will be within sustainable limits, with resource conservation taking precedence before any allowed use.

The first priority for allocation of fishery resource uses will be to meet the Treaty and Aboriginal rights of First Nations and Métis.

Allocation of other opportunities to use the fishery resource will consider the history of use, socio-economic factors and the following order of priority:

2. Saskatchewan resident recreational use;
3. commercial net fishing and outfitting;
4. Canadian resident recreational uses; and
5. non-resident recreational uses.

Should adjustments to the fishery resource use be required, the ministry will take into account the multiple users on the lake and adjustments will reflect the management actions that are in the best interest of the fishery in question.

It is important to note that recreational use is not necessarily a consumptive allocation and commercial use of the resource is a privilege that Saskatchewan confers through licensing.

Key Challenge: *Balancing the harvest to meet competing interests.*

There are differing views on the products desired from a fishery. Some recreational anglers want the opportunity to maximize their harvest, while others wish to have the opportunity to catch larger fish. Commercial net fishers desire maximum opportunity to harvest fish in order to maximize their economic returns. Depending on the nature of their operation, some outfitters wish to provide their clients the opportunity to catch and release an abundant supply of large fish.

As harvest approaches the maximum sustainable level in a fishery, fish populations generally become younger and smaller in size and subject to greater variability in abundance from year to year. Thus, users who desire the opportunity to catch a consistent supply of larger and older fish, must limit their overall harvest considerably.

Management Approach:

- Effective communication and information sharing is important to preventing and resolving conflicts.
- Lake and/or specific fishery conflicts are best resolved locally and by involving all affected stakeholders/users.
- Conflict resolution will strive for consistency in decisions and recognize past information and situations, but will also recognize the need for flexibility for specific issues/approaches.

Action: Maintain and establish, where needed local fisheries advisory boards to promote greater understanding and co-operation among different users.

Action: Maintain the provincial Fisheries Advisory Committee to deal with matters of provincial scope.

Objective 3: Promote and Develop Opportunities

Saskatchewan's commitment to the economic growth agenda reflects the desire for continued strong economic performance in a healthy environment. Government as a facilitator of development should ensure sustainable use of our fishery resource and support development of new opportunities.

Key Challenge: *Current methods of allocating to commercial users limits opportunity to others who wish to utilize the fishery.*

The fishery resource has been allocated traditionally on a first-come first-serve basis among the commercial users. The size of the allocation depends on the amount of resource requested and resource availability. The primary concern with such a process for allocation is that the priority for allocation of commercial users is based upon short-term demand rather than long-term, optimal use of the resource for the water(s) in question.

Although most lakes with fish in Saskatchewan are considered to be fully allocated, many are not fully utilized. In some cases, allocations may be used sporadically or not at all. This prevents others from having access to the resource and limits the overall socio-economic benefits. The issue of under utilization is complicated by the practice of some commercial users to actively manage their use to obtain a harvest level below the theoretical limits estimated by fisheries managers. This is done typically to maintain a high quality fishing experience (i.e. large and/or abundant fish), or for other business reasons, which may actually increase the economic performance of the fishery. Changing economic conditions or personal circumstances are additional factors that contribute to under utilization of allocations.

Allocation to outfitters is often based upon the size of lake, assumptions concerning camp occupancy (derived from surveys of outfitter use done during the 1970s and 80s) and legal angler limits. Waters designated as day-use were typically assigned limits to the number of angler-days that could be utilized.

Management Approach:

- Quotas based upon existing outfitter allocations will be provided as an allocation option for outfitting.

Action: Work with commercial users to develop policy to address underutilized allocations and to develop a more effective process to allocate new opportunities.

Key Challenge: *Opportunities to increase the social and economic benefits from the fishery may exist, but have not been fully investigated or utilized.*

Saskatchewan wants to foster an environment that supports and encourages a healthy business community. A number of potential opportunities may exist to increase the economic and social benefits that Saskatchewan residents derive from the fishery, while maintaining the long-term sustainability of the resource.

Management Approach:

- The province supports initiatives to develop value-added processing and provide freer export marketing of commercial fish products as a means to increase the economic value of the commercial fishery.
- Fisheries management will support Saskatchewan's economic growth agenda in a sustainable manner.
- Fisheries management will support the promotion of provincial tourism initiatives that benefit the fishery.
- Business interests are best equipped to take the lead on identifying, developing and promoting economic opportunities related to the fishery resource in Saskatchewan. The role of the ministry will be:
  - to ensure sustainable use and provide fair and transparent allocation of opportunity;
  - to provide a regulatory environment that facilitates economic development; and
  - to be receptive to potential opportunities.

Action: Facilitate and support economic and social studies on the fishery that provide greater understanding of opportunities and constraints within the provincial fishery.

Key Challenge: *Providing a diversity of fishing opportunities to meet the interests of distinct users where biologically and ecologically feasible.*

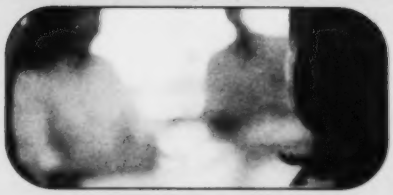
Providing fishing opportunities for many different species of fish should spread out the harvest and fishing pressure on the fishery resource. However, practices such as introducing native species into waters where they currently are not found, or introducing non-native species to waters can have negative impacts on the aquatic ecosystem. Care should be taken to evaluate the new opportunity in order to maintain ecosystem health.

Management Approach:

- The ministry will utilize population demographics information when managing the fishery and consider incentives to maintain or increase youth participation.
- The ministry will manage select stocked trout waters to provide trophy quality fishing, without restricting the type of angling allowed.
- The ministry will manage select perch fisheries in a manner that strives to maintain quality angling opportunities.
- The ministry will manage Competitive Fishing Events (CFE) in a manner that minimizes their impacts on the fishery resource.

Action: Encourage participation in angling by providing a free ice-fishing weekend that corresponds with Family Day in February.

Action: Create detailed standards and best practices for CFE organizers to minimize event impacts on the fishery resource.



Outcome 4

Shared Responsibility and Public Engagement

Introduction

Public interest for greater understanding and involvement in sustainable fisheries management is considerable. Many fishery resource users wish to be actively engaged in shaping the future of a sustainable fishery.

Objective 1: Informed Users

Key Challenge: *Enhancing public knowledge about fisheries management.*

Public awareness and understanding of fisheries management science and TEK and their utilization is important to successful fisheries management. Informed users understand their responsibilities and provide the required support for long-term sustainable fisheries management initiatives.

Management Approach:

- The provision of accurate and timely information on the fishery resource, its use, management and the conservation ethic will be a priority. A multi-pronged approach will be utilized and may include the use of:
  - computer technology and provision of information on the ministry website;
  - short (e.g. 5 minutes) instructional/informational videos;
  - Anglers' Guide;
  - outdoor education curriculum in schools;
  - media advertisements; and
  - volunteer groups.

Action: Create and implement a public information program on fisheries management utilizing a variety of communications media.

Action: Develop an education and awareness program for aquatic invasive species and disease.

Key Challenge: *Promoting personal stewardship of the provincial fishery.*

Stewardship is a philosophy whereby each of us as individuals accepts responsibility to protect, conserve and prudently use aquatic ecosystems. Stewardship recognizes that our individual actions may have a number of consequences and that we have a responsibility to manage our behaviour appropriately.

Each user of the fishery resource needs to examine and limit their total ongoing impact on the fishery resource. For example, an angler who practices catch and release exclusively, targets a high demand species such as walleye, and fishes many times during the year may have considerably more impact on the resource than an angler who may choose to fish only a few times per year, targets species in less demand and keeps everything they catch.

Fishery resource users can help the ministry by educating others, raising awareness of the provincial fishery and by participating in fisheries management initiatives.

Action: Collaborate with resource user groups to develop awareness and education programs aimed at promoting resource stewardship within the fisheries sector.

Action: Work with resource user groups to help collect information on fish populations on certain waters for fisheries management.

Objective 2: Public Participation and Community Involvement

Public involvement in fisheries management includes providing input to fisheries management policies and programs as well as hands-on activities such as habitat restoration, fish enhancement and the collection of fisheries harvest information. This participation benefits fisheries management in two ways. First, it helps the ministry to achieve certain goals and collect scientific information that would otherwise be missing due to staffing constraints. Second, it fosters trust and understanding between the public and government.

Key Challenge: *The need for communication processes that are effective and efficient.*

Benefits arising from public involvement in the decision–making process may include: obtaining better information on the resource and its use; clarification of preferences and conflicts; increased acceptance of decisions; and increased public respect for an agency that invites their participation in the management of the resource. Constraints to the process include: the potential for confrontation; a more difficult and laborious decision-making process; increased staff and participant time commitment and training; and adequate funding to cover the costs associated with the process.

Management Approach:

- The ministry will strive for regular, proactive consultation with fishery resource users.
- Opportunity will be provided for public involvement in fisheries management using mechanisms that are tailored to the issues and audience.

Action: Develop an effective and efficient process for pro-active consultations with groups affected by fisheries management decisions.

Key Challenge: *Need to determine the best methods of effectively resolving conflicts that arise among the multiple users.*

Currently, the ministry handles resource conflicts by analyzing the wide variety of information surrounding the conflict. Every attempt is made to be fair and reach a consensus decision that is acceptable to all parties. Often a solution that meets everyone's demands may not be possible.

Management Approach:

- Conflict resolution will remain the responsibility of the ministry; however, every fisheries user has a role to play in preventing and resolving conflict.
- Action to resolve conflict will be done in a timely manner.
- Lake and/or specific fishery conflicts are best resolved locally and by involving all affected stakeholders/users.
- Conflict resolution will include the existing suite of approaches but consideration should be given to arms-length boards/committees in some situations.

Action: Develop and utilize conflict resolution processes that are flexible and cost-effective.

Next Steps

The ministry will provide an opportunity for public review of the draft plan. We will continue to engage the First Nations and Métis. A final plan will then be written that will include success measures and implementation timelines on the actions.

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Glossary

Biotic: Relating to living organisms.

Ecosystem: A functional unit of any size (bog, pond, lake, watershed) that consists of one or more communities of organisms and their interactions among themselves and their environment.

Habitat: The environment of an organism; the place where it is usually found

Hydrological: Related to the study of the distribution, movement and properties of water in the Earth's atmosphere, on its surface and in its near-surface crust.

Limnological: An examination of the physical and biotic properties among different lake, reservoir and river ecosystem.

Natural recruitment: The rate at which new individuals enter a population of organisms without any human intervention, such as stocking.

Put and take fishery: A fishery where catchable sized fish are stocked on a regular basis for people to harvest.

Watershed: The total expanse of terrain from which water flows into a waterbody or stream.